



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

The Adaptive Nature of the Neoliberal State and the State-led Neoliberalisation of Nature: Unpacking the Political Economy of Water in Lima, Peru

Citation for published version:

Ioris, AAR 2013, 'The Adaptive Nature of the Neoliberal State and the State-led Neoliberalisation of Nature: Unpacking the Political Economy of Water in Lima, Peru', *New Political Economy*, pp. 1-27.
<https://doi.org/10.1080/13563467.2013.768609>

Digital Object Identifier (DOI):

[10.1080/13563467.2013.768609](https://doi.org/10.1080/13563467.2013.768609)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

New Political Economy

Publisher Rights Statement:

This is an author's accepted manuscript of an article published in the New Political Economy copyright Taylor & Francis (2013). Available online.

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



The Adaptive Nature of the Neoliberal State and the State-led Neoliberalization of Nature: Unpacking the Political Economy of Water in Lima, Peru

Antonio A. R. Ioris

Address for correspondence:

School of Geosciences,
The University of Edinburgh,
Drummond Street
Edinburgh EH8 9XP

This is the author's final draft as submitted for publication. The final version was published in *New Political Economy* by Taylor and Francis (2013)

Cite As: Ioris, AAR 2013, 'The Adaptive Nature of the Neoliberal State and the State-led Neoliberalisation of Nature: Unpacking the Political Economy of Water in Lima, Peru' *New Political Economy*, pp. 1-27

DOI: 10.1080/13563467.2013.768609

Made available online through Edinburgh Research Explorer

The Adaptive Nature of the Neoliberal State and the State-led Neoliberalization of Nature: Unpacking the Political Economy of Water in Lima, Peru

Abstract: The neoliberalization of water constitutes an emblematic illustration of the enduring encroachment of neoliberalism upon nature. Previous studies in Latin America have examined the transition from Keynesian water utilities to the neoliberal provisions of water services, but paid less attention to the adaptability of the state apparatus and the systematic adjustments required to sustain neoliberalizing strategies. Addressing this gap in the literature, the article examines two decades of change in the public water services of Lima, Peru, as one of the Latin American countries where neoliberal reforms have been more comprehensive and resilient. The analysis focuses on the water policies advanced by the national state and with the reconfiguration of the state apparatus in face of extra-economic factors. The neoliberalization of water may have improved the situation at the aggregate level, but inequalities, scarcities and vulnerabilities have been maintained and even reinforced. The achievements and failures of the neoliberalization of water have ultimately depended on a range of politico-economic and socioecological interactions creatively mediated by the state apparatus. In the end, however, the neoliberal adjustments in the structure and operation of the state have replicated the double exploitation of nature and society that has long shaped Peruvian economic history.

Keywords: water management, political economy, ecological economics, political economy, political ecology, economic geography, neoliberalism, Peru, Latin America

*“Even though the individual disappears before the apparatus which he serves,
that apparatus provides for him as never before”
Adorno and Horkheimer, Dialectics of Enlightenment*

Introduction

Neoliberalism, in its various forms and manifestations, has been the governing paradigm in most Latin American countries since the politico-economic reforms initiated in the 1980s. Albeit in a state of constant crisis and with mixed economic results (Lara and López 2007), the ‘actually existing’ experiences of neoliberalization in the region have entailed the destruction and creative reconstruction of the institutional arrangements established in the immediate post-war period. On the one hand, the need to respond to a legacy of socioeconomic and socioecological problems left from previous decades, while at the same time creating new opportunities for the circulation and accumulation of capital, have been important elements of the neoliberalizing trends set in motion in the sub-continent. Some economic recovery and new channels of democratic participation

secured the tacit acceptance of neoliberal reforms and prevented the emergence of radical alternatives to neoliberalism (Bebbington and Humphreys Bebbington 2011). Even in those countries where the control of resources and production activities returned to the national state, many central tenets of the neoliberal paradigm remain as strong as ever (Arsel 2012). On the other hand, the national state has never been able to fully delegate all the functions that neoliberal advocates would have preferred to be done by the market. Although the neoliberalization policies have tried to privatize common resources and public utilities, in practice the encroachment of neoliberal strategies upon nature and society has been partial and, at times, fiercely contested. The neoliberal reconfiguration of the public sector happened at the expense of increasing levels of populism and multiple concessions to the oligarchic elites (Demmers et al. 2001). In the end, the neoliberal ‘experiment’ in Latin America has exposed the central paradox of a “relative consolidation of universal political rights in the context of growing levels of socioeconomic exclusion” (Oxhorn 2009: 218).

Previous studies have examined the consequences of the transition from Keynesianism to neoliberalism in Latin America, especially regarding macroeconomic changes, political and ideological conflicts and the privatization of resources. However, there has been insufficient attention to the specific adjustments of urban services and the adaptability of state agencies (with noteworthy exceptions, such as the discussion of the contradictory reorganization of the state across different scales by Perrault 2005). Addressing this important gap in the literature, the present analysis deals with the water management changes in Lima advanced by the national state, as the main driving-force behind the neoliberalization of nature and the transformation of socionatural interactions. In effect, the contemporary state has become the main custodian of the social division of labour and of the capitalistic extraction of value from both society and nature. Employing a neo-Poulantzian approach, the state will be considered as a peculiar institutional

formation that operates beyond simple relations of political domination and economic control. The state apparatus comprises bureaucracies, parliaments, courts and control systems, as a complex organization that exercises authority, and maintains hegemony, over territory and peoples. “The theory of the capitalist State cannot be isolated from the history of its constitution and reproduction” (Poulantzas 1978: 25); as a result, a proper politico-economic examination requires a simultaneous unpacking of the structure, the forms and the functions of the state apparatus (Hay 2006).

The following pages will examine the modernization of the water services in the capital of Peru under ambitious, but flexible, neoliberal policies.ⁱ The empirical results will demonstrate that the advance of neoliberal reforms has not been linear, but required a systematic adjustment of the state apparatus and the constant reassessment of strategies and plans according to extra-economic pressures. Lima is today one of the largest megacities in Latin America, with more than 9.0 million inhabitants (around 30% of the national population) and an increasing participation in the globalized economy. Yet, the limited reserves of water along the Peruvian coast and the declining stocks of water in the Andean mountains (due to climate change affecting high altitude glaciers), together with the escalating degradation of rivers and aquifers, have challenged the ability of successive neoliberal governments to provide water to a growing population (INEI 2007). Considering the complex geography of water supply in Lima, recent economic and technical adjustments promoted by the state will be assessed in relation to political asymmetries and social inequalities embedded in the provision of water services. The renovation of the water of Lima constitutes a relevant example of the constant interventions of the state required to advance the neoliberalization of nature more broadly. But before we deal with the specific case of Lima, it is important to revisit theoretical claims about the political economy of environmental management and the contradictory provision of public services by the neoliberal state.

The neoliberal reform of environmental management and public utility services

In recent decades, the majority of Latin American countries have adopted public policies aimed at deregulating markets, lowering labour costs, securing financial reforms and promoting commercial synergies between private and public sectors. What happened in Latin America mirrors the advance of neoliberalism around the world, as a set of politico-economic procedures premised on market-like relationships and on the reconfiguration of the state (Larner 2000). One central element of the neoliberalization process in Latin America has been the expansion of market transactions to the management of natural resources and ecosystem processes whereby the capitalist rationality is extended and incorporates practices that were originally outside the economic domain. The spread of neoliberalism over ecosystems, resources and public services is an integral component of the ongoing modernization of capitalism in Latin America, which has included a complex set of procedures and discursive constructions that ultimately lead to the ‘neoliberalization of nature’. The neoliberalization of nature takes place through heterogeneous and differentiated procedures, such as the privatization of public utilities, the monetary valuation of ecosystems and the enclosure of the commons (Heynen and Robbins 2005). Under the neoliberalization of nature, the multiple connections and interdependencies between society and the rest of nature – what corresponds to the hybrid, socionatural configuration of the world – are increasingly inserted into the spheres of capital circulation and economic exploitation. Nature neoliberalization is a phenomenon that begins with the ideological “separation of nature and society and then reconnects them by reductively constructing ‘nature’ so that it can be encompassed within ‘economy’” (McAfee and Shapiro 2010: 581).

The neoliberalization of nature is ultimately part of wider strategies formulated to resolve some of the crucial contradictions of contemporary capitalism, especially the growing rates of

environmental degradation and the structural limits to the circulation of capital. It constitutes a mechanism of 'individualized collective action' (Barnett 2005) with the double purpose of containing the environmental externalities generated by economic activities and also fostering new opportunities for capital accumulation (Harvey 2005). For Castree (2008: 163), "nature's neoliberalisation is, by definition, a socioecological project" and its effects are simultaneously sociopolitical and biophysical. Bakker (2005) suggests that the management of natural resources and related public services under the sphere of influence of neoliberalism can be expressed by the term 'market environmentalism', which is a mode of regulation that fuses economic growth, efficiency gains and environmental conservation. Market environmentalism is seen by Bakker (2005) as a variant of ecological modernization which typically involves three interrelated processes: privatization, commercialization and commodification (note that other authors make use of additional or equivalent terminology). Privatization involves a change in the organization of resource ownership or a handover of management from the public to private sector (including the ownership or operation of public utilities). Commercialization comprises institutional changes in management practices through the introduction of commercial principles (e.g. efficiency), methods (e.g. cost-benefit analysis) and objectives (e.g. profit-maximization). Commodification is a non-linear, conditional treatment of environmental goods as economic goods (i.e. goods and processes formerly outside marketized spheres of existence entering the world of money) through market procedures such as monetization, standardization and exchange.

To be sure, these interrelated processes of ecological modernization are not unique to the neoliberal phase of capitalism, but have nonetheless acquired a distinct meaning under the neoliberalization of nature. For instance, the neoliberal enclosure of 'commons' relies not only on the physical appropriation, but on the monetary valuation of resources and processes such as air, water quality and ecosystem services. Likewise, privatization is more specifically related to the

divestiture or transference to the private sector of utilities and services established in the 20th century, and in the absence of explicit market mechanisms for dealing with natural resources, neoliberal approaches have employed 'market proxies', as in the case of environmental charges and the commercialization of environmental permits (Ioris 2010). It means that the neoliberalization of nature has not only preserved the foundations of the previous capitalist economy, but it has been instrumental in the intensification and renewal of socioecological interactions (Park et al. 2008). Brenner et al. (2010) further emphasize the 'variegated' character of neoliberal transformations and the successive 'waves' of neoliberalization upon uneven institutional landscapes. Neoliberalism is a dynamic and cumulatively deepening process, which "has not and does not pulsate out from a single control center or heartland; it has always been *relationally* constituted across multiple sites and spaces of 'co-formation'" (Peck et al. 2009: 106).

Because of this inherent complexity, the neoliberalization of nature has attracted growing scholarly attention and prompted a diversity of academic approaches (Himley 2008). Even so, Castree (2008) criticizes the analytical inconsistency due to the recurrent intention to accommodate highly idiosyncratic experiences of nature neoliberalization under the same analytical categories. The main criticism is that any mechanical search for similarities across countries and locations can easily become a formal, rather than substantive, exercise. Whereas the neoliberalization of nature is associated with the roll-back of the state from the economy and various forms of market-friendly policies (Castree 2011), there is a need to recognize the amorphousness, unsteady and 'impure' basis of neoliberalization, whose practices operate in a world that is 'more-than-neoliberal' (Castree 2006). Therefore, it is important to address the national and circumstantial specificities, "not least because of the tremendous and interlocking heterogeneities and indeterminacies between of both neoliberalism and the biophysical world" (McCarthy 2012: 186). The examination of the neoliberal transformation of socionatural

ontologies calls for theoretical and methodological approaches that can adequately capture the fundamental co-constitution between socionature and neoliberalization (Bakker, 2010). The task at hand is to “think through the duality of ecological-social transformations as part of a far more coherent project than has hitherto been the case” (Harvey 1996: 196).

There is, however, another major deficiency in most empirical studies of the neoliberalization of nature, particularly in Latin America, which is the fact that a more careful examination of the evolving role and the dynamic reconfiguration of the state apparatus is still largely missing. Yet, from local (re)regulation to the realm of international relations (Brand and Görg 2008), the state co-evolves with nature and society in truly inseparable ways (Ioris 2012). The authority of the state is instrumental in coordinating the access to nature through different spatial scales (Wissen 2009) and through social networks that constantly recreate environmental knowledge (Robbins 2000). Whilst the neoliberal state is commonly portrayed as an idealized formation that imitates business management, favours market institutions and should serve primarily the interests of private capital (Haque 2008), the advance of neoliberalism has not removed the capitalist state as the key socioeconomic mediator (Kristoffersen and Young 2010) and the main promoter of neoliberalizing strategies (Barnett 2005). Instead of market deregulation, as advocated by neoliberal authors and allied think-tanks, the advance of neoliberalism has happened through the re-regulation of socioeconomic and socioecological processes, through which the state is constantly retransformed (Bakker 2005). Furthermore, the new approaches and rationalities associated with the neoliberalization of nature are not politically neutral, but necessarily emerge from the (multiple) political commitments of the state apparatus and of the overall balance of power (Jessop 2008). On the one hand, the neoliberal state has had to react to pressing demands for resolving environmental degradation and related conflicts, which required some level of independence from the groups involved in socioecological disputes. On the other

hand, the state is a fundamental partner in the reinvigoration of capitalist social relations, which makes it permeable to hegemonic political interests.

The need to inhibit rent-seeking behaviours, maintain essential public services and contain ensuing conflicts constitutes vivid demonstrations of the challenges associated with the neoliberalization of nature. As a result, it is important to account for the diversity of state capitalist forms, not reducing the analysis merely to the format of the public sector, but focusing on the essential characteristics of state action according to specific historical and geographical conditions (Gerstenberger 2011). Larner (2000) argues that neoliberalism presupposes various ‘forms of governance’ that have encouraged organizations and individuals to conform to market institutions through the illusion of free choice and self-determination. Governance, instead of conventional government, can be described as the pursuit of more flexible strategies and mechanisms of public administration to accomplish certain socioecological tasks, realize values and manage environmental risks and impacts (Anderson and Leal 2001). Rather than a complete transformation of the rationality of the Keynesian state, environmental governance is supposed to be achieved through the combination of state-oriented and market-oriented (i.e. market-based) approaches (Mansfield 2007). Environmental governance has been launched, enacted and constantly contested through dynamic processes of scaling and rescaling (Bulkeley 2005) that eventually result in the hybrid configuration of the state as a mixture of liberalized and statist initiatives (Larner 2003) and also in multifaceted interactions between state and non-state actors (Paterson et al. 2003). There is, therefore, a contingent and highly synergistic association between the promotion of environmental governance and the reconstitution of the national state according to liberalizing goals (O'Brien and Penna 1997).

One central aspect of the neoliberal reconfiguration of the state apparatus has been its adaptability to overcome multiple obstacles and also benefit from new opportunities. The

neoliberal state has had to deal with unforeseen barriers, which include operational and political difficulties to insert socionature into market-like transactions and to suppress the opposition of local communities affected by the privatization of utilities or by the increased exploration of territorial resources. The environmental demands imposed on the contemporary state have gradually resulted in a creative, innovative process of statecraft, which includes renewed mechanisms of socionatural interaction and the persistent search for political legitimization. As a result, the reorganization of the state could not be defined *a priori*, but “it is rather a relationship of forces, or more precisely the material condensation of such a relationship among classes and class fractions” (Poulantzas 1978: 128). The neoliberalization of nature requires a constant reassessment of implementation strategies due to unexpected events that facilitate or hinder the initial objectives. In Latin America, popular reaction and operational difficulties have triggered some adjustments in the ownership and management of natural resources by the state (what can be defined as elements of a possible transition to 'post-neoliberalism'), although in practice the outcomes of those changes have been modest and the commercialization of nature has not diminished (Arsel 2012). It means that the neoliberalization of nature, promoted and enacted by the state, has proven to be more resilient, variegated and innovative than initially anticipated.

The neoliberalization of water provides an emblematic demonstration of the dynamic, and contradictory, processes of state adaptation associated with the advance of neoliberal agendas (Smith 2004). The encroachment of neoliberalism upon the water sector happens through a series of interrelated procedures, as demonstrated by Bakker (2005), which include both organizational changes (such as the transference of the ownership or operation of public utilities from the public to the private sector) and/or institutional modifications (for instance, treating the population as customers, prioritize financial concerns over rights and health issues, and engage private companies in the management of publicly administered utilities). The neoliberalization of water is

a complex phenomenon that evolves according to the specific politico-ecological and socioeconomic circumstances of the locations and the countries where it takes place. The renewed management and control over water are organized according to politico-institutional demands in a way that inscribe political power in the management of water itself (Mosse 2003). More importantly, the implementation of neoliberal agendas in the water sector has had to face anticipated and unanticipated barriers (Sangameswaran 2009) and in that process the state apparatus has to be constantly modified (Narsiah 2010). During the Keynesian period of economic recovery in the interwar and post-war phase, the provision of water services was made available to larger segments of the population, often below production costs, as a basic requirement of social well-being and national development. Keynesian provision of public services corresponded to the policies of the welfare state (particularly in Western countries) or of the developmentalist state (in most of post-colonial and industrializing countries, such as in Latin America). The ultimate aim was to provide public water services, at least in the central and more consolidated areas of the cities, to secure a cheap, reliable work force and to facilitate economic growth.

Within only a few decades, however, the model was exhausted due to poor efficiency, mismanagement of resources, lack of investment capacity and widespread environmental degradation (Bakker 2005; Ioris 2009; Narsiah 2010). The crisis of public water services coincided with the expansion of neoliberal reforms since the late 1970s, which facilitated the introduction of regulatory and operational strategies aimed to improve water services and create a new locus of capital accumulation. According to the neoliberal doctrine, through the neoliberalization of water, larger sums of money are expected to circulate via the introduction of economic incentives – such as subsidies, sanctions and tariffs – or through the reorganization of public-private arrangements – such as the creation of new market transactions, the monetization of water (i.e. the attachment of monetary value to water), the payment for ecosystem services and the privatization of public

utilities (World Bank 1997). Moreover the transference of state functions back to private operators reflects the priorities of the politically hegemonic sectors and tends to exacerbate social and political asymmetries. Neoliberal water policies aggravate social differences and create additional competition for resources, further exacerbating the (often already problematic) interactions between state agencies and the general public (O'Reilly and Dhanju 2012). Despite the rhetoric of efficiency and rational management, the neoliberalization of water has primarily assisted the extraction of rent and the circulation of capital rather than responding to social demands for access to and conservation of natural resources (Ioris 2008). As early observed by Marx (1973: 531), the privatization and capitalization of public services and their migration into the domain of the works undertaken by capital itself “indicates the degree to which the real community has constituted itself in the form of capital”.

The foregoing review of the environmental dimension of the evolving neoliberal state will inform the examination of the local institutional and techno-economic changes around water in Lima in the last two decades. Rather than the ‘collapse of the modern urban idea’ due to the ensuing neoliberalization of nature (Graham and Marvin 2001), neoliberalism has transformed parts of the capital of Peru into hypermodernist spaces, intensified the circulation of money and converted the public water utility into an opportunity to neoliberalize nature. Still, the neoliberalization of water in Lima turned out to be more difficult than first thought due to both the sociopolitical barriers and the biophysical properties of water. One of the main failures of the neoliberalization of water in Lima has been the focus on short-term results and on the creation of conditions to attract the private sector, which inevitably raised opposition from various sectors of civil society. The need to deal with unexpected challenges triggered important adjustments in the operation and in the configuration of the state. Our discussion will pay special attention to the opportunities and constraints that emerged during the adoption of neoliberal platforms and how the

national government (personified in the figure of the various presidents) reacted in order to maintain the overall direction of the liberalizing policies. The analysis will also explore the various mechanisms of to involve private operators in state interventions and the inherent unwillingness to address sociospatial inequalities. The next section will start with an overview of the transition from statism to neoliberalism and will then consider the specific circumstances of water services and the modifications produced, and experienced, by the Peruvian State.

The neoliberalization of water and in the evolution of the neoliberal state: the case of Lima

Peru's road to neoliberalism

The ongoing adjustments in the structure and operation of the state in the face of neoliberal pressures have followed the long pattern of conservative socioeconomic change in Peruvian history. Important liberal reforms were implemented in the 1930s, under the advice of the Princeton economist Edwin Kemmerer, aiming to stabilize the financial sector in accordance with the demands of those in control of the export of cotton, sugar, copper, silver and petroleum. Some import substitution industrialization took place in the interwar period, particularly because of the protectionist measures adopted by the national state (Selowsky 1981). In contrast to most Western countries, the focus of Keynesian-like policies in Latin America was primarily on state-led, fast-paced development (rather than the construction of the welfare system), that is, a developmentalist model that assigned a strategic economic role to state-owned companies and only a secondary responsibility to private (national and foreign) enterprises. The Keynesian experience of economic growth in the post-war years culminated in the 'state capitalism' of the military government of General Velasco (1968-1975). According to O'Donnell (1982), the military regimes in South America during this phase were apposite responses to the barriers to capital accumulation and an attack on the concessions to labour demands given by previous democratic governments. The first

half of the 1970s was a moment of fast economic growth, benefiting from the abundance of foreign credit that served to fuel private and public spending alike. Moreover, with the instability in global markets after the petroleum crisis of 1973, the potential for growth was soon exhausted. Economic problems were aggravated by the political ineptness of General Morales, who succeeded Velasco in 1975, which resulted in the collapse of the military regime.

The return of a civil government in 1980 created the opportunity for an experience of proto-neoliberalism under President Belaúnde, but that was both premature and poorly managed, lapsing into incoherence and ineptitude (Conaghan and Malloy 1995). The nationalistic government of President Alan García (1985-1990), described by Wise (2003) as a ‘nestructuralist backlash’, promoted a short-lived economic reactivation, which was then followed by macroeconomic volatility and hyperinflation, while the country was descending into violent conflicts between the army and left-wing guerrillas. Economic policies were being carried out by a weak, ill-equipped bureaucracy that was also seriously undermined by the high levels of centralization and the autocracy of the García Administration. The series of economic and political mistakes resulted in a situation of acute recession, low investments, debt burden and overall ungovernability. The growing tensions between state, labour and capital, especially in 1988, resulted in the worst economic crisis of republican history (Durand 2005). The main response to those problems came in the form of a politico-economic mobilization in favour of liberalizing reforms. These were put forward and coordinated by Mario Vargas Llosa, the famous novelist (awarded the Nobel Prize in literature in 2010) who later became an ideologue and enthusiast of neoliberalism. With the popular rejection of the left-wing candidates, the second round of the turbulent presidential election of 1990 was polarized between two right-wing exponents: Vargas Llosa and Alberto Fujimori. Fujimori, the winner of this crucial election, was an improvised candidate who, even by the end of the campaign, had virtually a blank manifesto and no concrete

proposals for dealing with the crisis. After his surprising election, Fujimori was put in charge of a massively complex situation with a very questionable political legitimacy, limited room for manoeuvre and no appetite for compromise. Yet, the new president “began his administration in the unique position of lacking a proper electoral party but having no single opposition figure or party confronting him” (Mauceri 1995: 22).

Under mounting pressures from business sectors, together with the growing number of neoliberal governments throughout Latin America, the temptation to embrace the neoliberal recipe was almost unavoidable. The task of persuasion was competently undertaken by national and international economists such as directors and senior managers of the IMF and the World Bank (Durand 2003). Eventually, it was not difficult to convince Fujimori that there was no alternative but to embark upon a thorough neoliberal agenda of reforms; in a matter of months, the new government was tacitly, and perhaps ironically, supported by the political group of Vargas Llosa, which provided some additional legitimacy and ideological endorsement. Soon after its inauguration, the Fujimori government started to work on a stabilization programme aimed at resuming debt-service payments and reinserting Peru in the international financial community. An initial structural adjustment plan opened the way for an agreement with the Paris Club and to a special treatment in the form of an unprecedented cash flow relief. With the ‘self-coup’ in April 1992, the regime became increasingly authoritarian, which facilitated the introduction of strict measures to stabilize the economy and bring inflation under control (Gonzales de Olarte 1998). Fujimori’s personal popularity was much helped by the arrest of Abimael Guzmán, the main leader of the Maoist guerrillas, in September of 1992. Ultimately, the Fujimori government was the result of a serious crisis of the Peruvian capitalism and its interventions were primarily intended to deal with the social, political and monetary hindrances to capitalist development. The neoliberal reforms had the effect of opening the country to a deluge of foreign goods and debilitated the old

industrialist sector (industrial production was reduced from 23% of the GDP in the 1980s to 16% in the 1990s). Between 1991 and 1998, the Fujimori government sold off more than two hundred companies that were worth nearly US\$ 9.0 billion (Contreras and Cueto 2007), while foreign investments over the decade totalized more than US\$ 13 billion (Gonzales de Olarte 2005).

In the course of this fast-moving process of change, the implementation of neoliberal reforms had to constantly respond to both expected and unanticipated constraints. New state agencies were created and the existing ones had their role significantly reformulated (such as the Peruvian Central Bank that had its policy-making power considerably eroded). Fujimori's populist, but also authoritarian, leadership was based on fluid ties with the masses, which required constant readjustment at the expense of more coherent policies (Solfrini 2001). Nonetheless, because of economic recovery (e.g. GDP increase of 7.1 in 1991, 6.4% in 1993 and 13.1% in 1994), Fujimori sustained military backing and was then re-elected in 1995 (Wise 2003). Economic growth was primarily based on the reorganization of public property and various fiscal incentives for private businesses (rather than the adoption of new technologies and the creation of jobs). To be sure, the economy was still largely reliant on the companies introduced by the 'developmentalist' state in previous decades, on the export of minerals and the expansion of services. Similar to that which took place under García, the authoritarian and populist style of the president produced constant clashes with the political establishment and government agencies, which gradually affected the efficacy of neoliberal policies. The end of the Fujimori Administration was marked by serious evidences of corruption and state violence, as well as by the return of economic instability, lower rates of growth and popular dissatisfaction. The government collapsed in 2000 (since 2009 Fujimori has been serving a 25-year sentence for human rights violations) and was succeeded by the interim government of Valentín Paniagua, during which the new president, Alejandro Toledo, was elected.

Toledo's primary role was to administer the politico-economic crisis left by Fujimori and he did not attempt to change macroeconomic policies or challenge the strong influence of business groups. The Toledo Administration played to the interests of foreign capital and the old national oligarchy, with special attention given to free trade agreements and additional utility privatization. While the new president was an economist ideologically committed to the neoliberal agenda, in the end he became too embroiled in controversies that compromised and weakened his political leadership (Wise 2003). Toledo was Peru's first freely elected president of Indian descent and promised to remain true to his ethnic roots, but in the end his administration was mostly a disappointment in the eyes of the poor, especially the large non-white majority of the population (Lucero 2009). In 2006, in one of most remarkable episodes of recent Peruvian politics, Alan García, the same leader who had effectively disorganised the national economy through a dramatic confrontation with the international financial system and subsequent attempt to nationalise the banking sector, wins the presidential election. García returned to office as a converted neoliberal who maintained key policy-makers and officials from the previous governments in their positions despite political party differences. Protests against the transfer of territorial resources to transnational corporations (such as gas reserves in the Amazon) were treated with violent repression and the criminalization of dissidents. In 2011, Ollanta Humala, the leader of a coalition of left-wing parties, defeated the Fujimori's daughter in the second round of national elections with an uncertain post-neoliberal manifesto. This brief overview of the adaptive evolution of the economic policies championed the Peruvian State will now inform the assessment of nature neoliberalization in Lima.

Nature neoliberalization and the adaptive neoliberal state

The neoliberalization of water in Lima – as a sectoral example of nature neoliberalization more broadly, which in Peru has included the concession of minerals, forests and ecosystem services to national and international private companies (Cornejo Ramírez 2008) – has emerged as a response to (some of) the problems left by the Keynesian-like organization of public services in the capital city. During most of the 20th century, local water services were managed according to technocratic priorities and received only limited investments, which largely failed to respond to the constant growth of the population, as well as to the increasing environmental degradation of the three urban catchments (Rímac, Chillón and Lurín). Significant contingents of people migrated from the provinces to the capital, especially in the 1950s and 1960s, in search of better life conditions and job opportunities (IMP 1989). Yet, most of those who moved to Lima could not find appropriate accommodation in the regular areas and had to build their homes in one of the hundreds of *barriadas* (unplanned and unauthorized settlements in the periphery, typically established by the occupation of a vacant plot of land without water and sanitation infrastructure). Even though the ‘developmentalist’ state was legally responsible for the provision of public services, the deficiencies in the water sector turned into one of the most serious problems for the low-income population of Lima (Matos Mar and Matos Lagos 1990). The sporadic interventions by the ‘developmentalist’ state played a role in containing public criticism, but for the majority of the population the results remained patchy and discontinuous. Infrastructure maintenance was carried out on an irregular basis and mainly in middle class and elite neighbourhoods (Calderón Cockburn 1993). The public water utility was reorganized in 1981 under its current name (Drinking Water and Sewerage Service of Lima - SEDAPAL) and was the main provider of the National Service of Water and Sewage Supply (SENAPA).

At the time of the 1990 presidential election, the water and sanitation services of Lima had practically collapsed with a quarter of the metropolitan population without public water supply and

a third without sanitation (IMP 1989). The incoming Fujimori Administration soon started a review of the sectoral policies and a re-examination of the management of SEDAPAL according to the neoliberal calls for efficiency and cost recovery. The scale of the water problems became even more evident when an outbreak of cholera erupted in 1991, which killed more than 150 persons in Lima alone (Gherzi and Ñaupari 2005). Emergency measures achieved some localized improvements in terms of leakage reduction and pipeline replacement, which temporarily alleviated some of the pressure. Early results encouraged the government to intensify the rate and the scale of the institutional reforms in the water sector (Alcázar et al. 2000). In 1992, a new regulatory agency was established (National Sanitation Service Superintendence - SUNASS), responsible for supervising service providers, approving tariffs, establishing norms, imposing sanctions and resolving user controversies. The institutional framework was reorganized under the 1994 Water and Sanitation Law (No 26338) and SENAPA, which used to be the single national state holding company, was dissolved to give space to regionalized neoliberal strategies. Throughout the country, water services were devolved to municipal or provincial administrations, although the water utility of the capital remained in the hands of the national government mainly because of its crucial role in the national utility privatization programme. In order to prepare SEDAPAL for privatisation, additional investments were required in infrastructure and management efficiency, which relied on a US\$ 600 million loan from the World Bank (Alcázar et al. 2000), sustained increases in domestic water tariffs (from US\$ 0.17/m³ in 1990 to US\$ 0.41/m³ in 1995), reduction in labour costs (between 1991-1992 the company lost 721 workers or 23% of the workforce) and direct government funding (from US\$ 26 million in 1990 to US\$ 80 million in 1996; data from SEDAPAL annual reports).

At a time when the management of water utilities around the world was being increasingly transferred to the private sector, the announced privatization of SEDAPAL in 1994 attracted

significant international interest. Three consortiums prequalified to bid for the concession to operate SEDAPAL for 30 years (i.e. Canal de Isabel II from Spain, and Compagnie Generale des Eaux and Lyonnaise des Eaux from France). However, the Peruvian State had to face unforeseen and cumulative obstacles that actually prevented the privatization of the water utility of Lima. After various delays, the process was postponed until the presidential election of 1995, followed by further adjournments and an ‘indefinite postponement’ in 1997, although it was not formally cancelled due to concerns over litigation costs associated with the preparation of the bids. According to several of our interviews with regulators and policy-makers two main issues seem to have undermined the acceptance of the privatization by the general public and by members of the national government. First, the certainty of much higher tariffs, given that the private concessionary would have to probably make a fourfold increase in domestic tariffs to cover the contractual requirement (i.e. infrastructure works worth US\$ 3.0 billion). Although the regime was semi-dictatorial, public opposition was fiercely opposed to shifting the day to day operation of the public utility to private international bidders. In that context, it would have been difficult to introduce such reforms as adjusted tariffs, reduced cross-subsidies, fines for non-payment of tariffs and the introduction of domestic water meters. Second, the national state would still remain in charge of procuring new sources of water in the Andes, that is, only the treatment and distribution of water were being transferred to the private concessionary. This means that after privatization the state would have been left responsible for important, and very expensive, elements of the water infrastructure. In the end, the privatization of SEDAPAL proved to be an uncertain and politically risky change, especially considering that some improvements were already being achieved due to investments made during the preparation for the tender process.

The political price of privatization was simply not affordable to Fujimori, particularly when his popularity was declining (due to the resurgence of serious economic problems and the

dwindling impact of the first round of neoliberal reforms) and Lima was one of the main political strongholds of the president. As a result, after the 1995 re-election of Fujimori, SEDAPAL embarked on a larger programme of investments in infrastructure recovery, management rationalization and operational efficiency (SEDAPAL 1998). Although privatization failed due to political and managerial obstacles, it did not mean that market-based policies were abandoned by the Fujimori Administration. On the contrary, the state was led to retain the control and ownership of the water industry of Lima, but increasingly running SEDAPAL according to the neoliberal goals of cost reduction, profitability and a more distinctive commercial relationship with the public. The fact that, despite its radical neoliberal tendencies, the national government continued to directly handle the water services of Lima was an early indication of the need of the state to adapt to the changing political landscape and fast evolving economic circumstances. In practice, the government of Fujimori, one of the most neoliberal administrations of Latin America in the 1990s, was responsible for large sums of money devoted to the water sector of Lima. More than US\$ 2 billion were invested in equipment, technology and construction works (equivalent of 0.5% of the Peruvian GDP in the 1990s, according to SEDAPAL 2005). Domestic tariffs rose from US\$ 0.17/m³ in 1990 to US\$ 0.41/m³ in 1995, an increase of 141% in five years (Alcázar et al. 2000). Additional tariff revisions happened in 1995 (17%), 1996 (10%), 1997 (19%), 1998 (14%), 1999 (9%), and 2000 (9%).

The higher levels of revenue and international loans helped to ease water problems and temporarily reduced the appetite for privatization within the national government. Certainly, some of the key members of Fujimori government had always shown ambivalence towards the privatization of the water utility of Lima. That corresponded to the inconsistencies between the technocratic and the populist facets of the administration and, more significantly, demonstrated the fluid and idiosyncratic advance of neoliberal agendas. However, the seriousness of the water

supply situation was barely mitigated during the first phase of water neoliberalization (1990-2000). New settlements continued to be established in the periphery of the capital and, what is worse, were increasingly located in more distant, hilly areas where the provision of water was more expensive and more challenging (Calderón Cockburn 2005). The economic downturn of the late 1990s, together with growing political instability, meant that the government struggled to maintain the rate of improvement. Investments dropped from US\$ 228.9 million/year in the 1990s to US\$ 166.6 million/year in the period immediately after Fujimori's removal from power. The production of treated water was significantly reduced between 1998 and 2002 (see Table 1) and those residents without access to water mains continued to rely on private sellers, who typically charged much higher prices – up to eight times more – for the same volume of water (Solo 1999). Note also in Table 1 the rate of network expansion and the growing number of customers invoiced but also increasing tariffs and mounting complaints.

[Table 1 here]

The response of the Peruvian State to the declining level of investments in the water services of Lima was a renewed search for market-friendly mechanisms that could win back the interest of international private companies, even without the formal privatization of SEDAPAL. In 2002, the Vice-Ministry of Sanitation was created as a new policy-making unit within the government with direct responsibility for maintaining the neoliberalizing reforms. The National Plan of Sanitation, approved by the Toledo Administration in 2006, defined the 'participation of the private sector' as a key strategy to expand water and sanitation services in the country.ⁱⁱ The first experience of public-private collaboration in Lima was the 27-year Build, Operate and Transfer (BOT) project *Agua Azul*, which was formalized in 2000 with an Italian company to produce approximately 5% of Lima's water needs. Interestingly, rather than bringing its own money, the concessionary financed a US\$ 35 million investment programme by raising US\$ 10

million equity and selling a US\$ 25 million bond issue to local investors, including pension funds (Hall and Lobina 2007). It is relevant to mention that, at the time of our fieldwork in 2009, the contract was highly disadvantageous for SEDAPAL, which had to pay in full for the water produced by the Italian concessionary even if they do not ‘take’ the whole quota of water under the terms of the contract. In effect, because of infrastructure deficiencies, SEDAPAL was only selling 35% of the total volume paid to Agua Azul due to the limited distribution system (i.e. a ‘take-or-pay’ contract in which the buyer has to pay even if the product or service is not used).

Regardless of the noticeable shortcomings, the formalization of this first public-private partnership (PPP) set the tone of the second decade of water neoliberalism in Lima (2001-2010), which was marked by a new round of state interventions and by repeated attempts to involve the private sector in infrastructure construction and service provision. To stimulate additional PPPs, the Inter-American Development Bank approved a US\$ 50 million loan in 2005, topped up with an additional contribution of US\$ 22.3 million from the German development bank KfW. More significantly, it was the return of Alan García to the presidential palace in the middle of 2006, at a moment when the national economy was booming again – mainly because of the international price of the minerals exported by Peru – that allowed the continuation and renewal of the neoliberalization of water in Lima.ⁱⁱⁱ García remained the same populist politician of his previous term in office in the 1980s, but did not hesitate to adopt a largely neoliberal platform and to associate himself with major business organizations. Similar to what happened to Fujimori, the inauguration of the new García administration was closely monitored by the World Bank and other multilateral agencies, which also emphasized the business opportunities related to the improvement of public services and water infrastructure in Peru (Giugale et al. 2006). But they need not have worried: García signed several free trade agreements, the most relevant with the United States, in practice opening the country ‘for business’. In 2007 President García launched

the programme Water for All (APT) with more than three hundred individual projects nationwide and 150 in Lima alone. APT was essentially an umbrella plan that amalgamated several initiatives financed through foreign loans from the JBIC and World Bank, the national treasury and SEDAPAL's own revenues. Crucially, APT greatly enhanced the opportunities for foreign companies to take part in the water industry of Lima, particularly related to the construction of a series of 'megaprojects'. Those included various PPPs related to the construction of a water transfer scheme from Lake Huascacocha in the Andes (called project Marca IV), a desalinating plant in the south of Lima (to be constructed by a new PPP water utility, "Aguas del Sur de Lima") and the sewage treatment plants of Taboada and La Chira. See a summary of the APT investments in Table 2.

[Table 2 here]

Probably the most representative projects of the water policies under García were the water treatment plant of Huachipa and the expansion of the water distribution system to the North Cone of Lima. The Huachipa project consists of a water intake facility on the River Rímac, a potable water treatment plant with an initial capacity of 5 m³/s (supposed to reach 10 m³/s in the future), and 10 km of pipeline to connect the treatment plant to the distribution network. It was constructed by a consortium managed by the Brazilian company Camargo Corrêa with the French OTV (in which the same Brazilian firm has an 81% share). As part of the contract, Camargo Corrêa will operate the plant for the first four years, investing USD 33.7 million during the period. The political significance of the project was exploited by President García since the beginning of the construction in 2008 and until the scheme was inaugurated on 08 Jul 2011, only a few weeks before the end of his term in office. More relevant than presidential speeches and public ceremonies, however, the legacy of those works will be a sustained and upward realignment of water tariffs to pay for the investments and services provided by private operators. It means that

SEDAPAL and the water services of Lima are effectively locked up in the public-private framework for many years in the future. As can be seen in Table 3, around a quarter of the operating costs of the water utility comprise the purchase of treated water, the maintenance of public-private partnerships and the payment for the Huachipa scheme.

[Table 3 here]

A significant part of the investments made during the García government will be recovered through further and sustained increases in customer tariffs, which had already risen from US\$ 0.39/m³ in 2001 to US\$ 0.77/m³ in 2008 (97% increase against an inflation of 21% in the same period). Additional tariff adjustments were formally approved (obviously, on the top of inflation corrections): 16.42% in 2007, 7.0% in 2010, 4.0% in 2011, 4.0% in 2012 and 4.6% in 2013 (SUNASS 2007, 2010). SUNASS also agreed with 5.2% increase in domestic water charges associated with the expansion of various water and sanitation projects (and 7.0% to pay for the new scheme Marca II to bring water from Lakes Pomacocha and Huallacocha). Higher tariffs were adopted in tandem with additional efforts to recover unpaid bills and to increase micro-metering (i.e. installation of domestic water meters), which expanded from 62.8% in 2000 to 69.2% of the residences in 2010 (SEDAPAL annual reports). To secure supplementary funds and send a message of strong business commitment, SEDAPAL was enlisted in the Lima Stock Market and Decree 1031, passed in June 2008, authorized the water utility to negotiate there at least 20% of its shares. For all means and purposes, in that process SEDAPAL is becoming less of a public utility, not only in operational terms, but also its ownership is being partially transferred to the hands of private companies (in the form of shares). Stock market operations were energized by the rising profitability of SEDAPAL since the beginning of APT programme: from 0.20 in 2007 to 0.22 in 2008 and 0.23 in 2009 (SUNASS 2010). SEDAPAL has been considered among the three most

attractive and profitable companies out of a list of 34 public companies with shares being commercialized in the stock market.^{iv}

This ‘proxy privatization’ of SEDAPAL may have facilitated the extraction of rent by private partners, but has not improved the long-term performance and reliability of the public water services of Lima. Despite more than two decades of adjustments in the water sector of Lima, for those living in the periphery or in pockets of poverty in central areas the struggle for water was still a daily problem: 19.4% of the population without public water services and 23.4% without public sewage, while 79% of the sewage was still not treated and 38% of treated water was lost through leakage (SUNASS 2010). A large contingent of low-income residents, mostly working in the vast informal sector continued to live in crowded slums or in remote urban settlements with precarious water supply. At the same time, significant sums of money circulated through household water tariffs (US\$ 350 million in 2008) and local water vendors (around 800 water trucks were still in operation).^v The more perverse consequence of the neoliberalization of water in Lima is the centrality of the circulation of money through various mechanisms, at the expense of maintaining the inequalities between centre and periphery regarding the availability and quality of public water services. A critical interpretation of achievements and limitations during the transition from the first to the second decade of water neoliberalization, and the prospects for the future, is provided next.

State adaptability but growing contradictions

As demonstrated above, nature neoliberalization is an intricate, non-linear process that requires constant institutional and organizational adjustments according to evolving politico-economic circumstances. Table 4 shows the differences between the services provided by the developmentalist Peruvian state, the idealized model and the actually implemented

neoliberalization of the water industry of Lima. In retrospect, it is clear that there have been four different moments of the water neoliberalization process. First, between 1990 and 1995 there was a period of reorganization and emergency investments in SEDAPAL, which focused on measures to restore the minimal quality of service and prepared the utility for privatisation; a second phase between 1996 and 2000, which was centred on pipeline rehabilitation, additional sources of raw water, leakage reduction and primary distribution pipelines which can be interpreted as a temporary abandonment of privatisation; a third phase between 2000 and 2006, which was a moment of uncertainty and reorientation of the neoliberalizing reforms; and finally the period between 2007 and 2010, which was dedicated to the improvement of primary and secondary distribution pipelines. Those four successive phases unfolded not only according to unforeseen barriers and emerging opportunities available during the advance of neoliberalism in Peru, but also owing to specific eco-hydrological conditions (i.e. reliance on water reserves in the mountains) and sociopolitical reactions (i.e. protests by local residents and representative organizations). Interestingly, if the neoliberalization of the Peruvian economy has been more uncompromising than in other parts of Latin America, the specific neoliberalization of water in Lima has been conversely more subtle than in other cities where the public utility was formally transferred to the private sector (e.g. Buenos Aires, Mendoza, La Paz, Cochabamba, Campo Grande, Limeira, etc.).

[Table 4 here]

One important particularity of the Peruvian experience is the fact that the national state retained ownership and control of the water utility as a productive strategy of nature neoliberalization. After the failed attempt to privatize SEDAPAL in the early 1990s, the government realized that it was politically more prudent and economically meaningful to prioritize other mechanisms of private sector involvement. Following the expectations of policy-makers and

multilateral agencies, the state continued to be responsible for the costliest parts of the process (e.g. repair and extension of infrastructure, producing new sources of raw water, environmental restoration, dealing with the population, etc), while national and especially international private companies could concentrate on profitable construction and operation contracts. To be sure, even during the Fujimori government, there was less enthusiasm for the privatization of water utilities than with other public sectors such as transport, mining and telecommunications (although in some of our interviews, for example with World Bank officers, some dissatisfaction with the abandonment or postponement of the formal water utility privatization was revealed).^{vi} Moreover, in contrast to that which is still argued by the advocates of 'formal' utility privatization, there has been no contradiction in the strong role played by the Peruvian State during the neoliberal reforms of the water services. In effect, it was perfectly rational and advantageous for the purposes of neoliberalism to maintain SEDAPAL in the hands of the public sector. The private operators and construction companies benefitted by not being directly involved in the management and ownership of the water utility, enabled by the national government's retention of some of the most difficult and expensive tasks.

That seems to explain the attitude of the Minister of Sanitation Garrido-Lecca, a member of the neoliberal García Administration, who categorically dismissed the rumours that SEDAPAL was again being considered for privatization in 2007. The Minister provided robust reassurances that privatization was not going ahead, especially because the ensuing private operator would have to quadruple water rates in order to turn a profit. Such a controversial move would certainly have reignited fierce political debate on the direction and legitimacy of the water reforms. Considering such turbulent and contested privatization scenario, a state-led water utility seemed the most sensible solution, as it still allowed private companies to participate in the water business of Lima, but at much lower risks and costs to them. That is why it is hard to agree with the observation of

Hall and Lobina (2007) that SEDAPAL remains an example of a successful public utility, given that in actual fact an important part of its operation has been gradually transferred to the private sector and increasingly managed according to the demands and interference of national and international private companies. What is more, the resilience of such pro-market approaches has gone beyond the presidential administrations that were more publicly associated with neoliberalism. Even the chief executive of SEDAPAL appointed by President Humala, who was elected with an anti-neoliberal manifesto, emphatically affirmed that the utility needs "not one, but numerous" [*no se necesita una, sino muchas*] public-private partnerships to improve service coverage.^{vii} In the end, there has been virtually no criticism, even among members of the Humala government, of the inadequacies and distortions of the neoliberal water policies put into practice over the last two decades.

Particularly during the government of Alan García, SEDAPAL became a favourite locus for temporary business contracts, which further increased the vulnerability of the existing water services and compromised strategic thinking. The water services of Lima have attracted foreign capitals and international loans, but after the 2008 financial crisis there is no guarantee that investors will maintain the flow of investments in the medium- and long-term. In several of our interviews with regulators and SEDAPAL staff the flimsy basis of service expansion under the APT programme introduced by President García was pointed out. Informants also criticized the fact that SEDAPAL seems to struggle to supervise the number and complexity of projects. This is not helped by constant evidences of corruption and misuse of resources, for example, the dismissal of the president of SEDAPAL Guillermo León, in February 2010, due to indications of involvement in illegal activities involving local politicians and private companies. SEDAPAL has systematically reduced its workforce by using more contracted-out workers, who are paid less and receive fewer benefits than regular members of staff (interviewees mentioned a salary of US\$

250/month, which is above the typical income of around US\$ 200 of most workers in Lima, but it requires seven days of work per week with virtually no labour rights or access to safety equipment). Overall, the neoliberal reforms may have expanded the infrastructure and rehabilitated the public utility at the aggregate level, but there is still no solution to the growing demand for water in the periphery of Lima and to the need to provide more reliable services at a cost affordable to the low-income population.

If the local residents are now expected to pay more for current and future investments without an equivalent improvement of services, the regulatory framework has also proved highly inadequate to secure an efficient and fair provision of water services (Barrantes 2005). The weaknesses of the regulatory agency (SUNASS) are considered to be one of the critical problems of the water sector so far (although, from the business perspective, it could also be said that such weaknesses have facilitated the adoption of changes in policies and strategies needed to achieve neoliberal goals). SUNASS has lacked the instruments for penalizing water utilities for their failures and seems unable to avoid systematic political interferences (Bonifaz and Malásquez 2008). A main challenge faced by SUNASS has been the implementation of an objective price setting formula that allows the tariffs to gradually increase in order to reflect the long-term marginal cost of the service (Berg and Lin 2008). A more critical issue has been the application of tariffs that do not correspond to the quality of services and the social reality of different customer groups. It is true that SEDAPAL has a system of cross-subsidy in which domestic customers who use less than 25 m³/month (around 89% of the residences) are subsidized by commercial and large domestic clients (e.g. customers that use less than 10 m³/month pay 0.875 sol/m³ and those that consume more than 50 m³/month pay 3.796 soles/m³). However, in practice, the cross-subsidy system adopted by SEDAPAL has worked mainly as a political compensation for the repeated

tariff increases since the early 1990s for those families in the periphery of Lima that pay a proportionate higher price for inferior water services.

On the whole, institutional reforms and infrastructure investments have been implemented against a background of spatial and sociopolitical inequalities that have historically characterized the urban development of Lima. Such pattern of unevenness has been maintained under water neoliberalization, despite misleading claims of universalization and better regulation made by the state apparatus. In fact, the flexibilization of water services, adopted in order to attract private companies to the water business, has not served the basic needs of most of those living in the capital city. Despite the rhetoric about the advantages of the neoliberalization of water, market-based solutions have privileged the better-off minority of the population of Lima, who had their services improved without having to take special responsibility for the investments made by the water utility. Neoliberalism has offered only short-term answers to challenging water problems of the capital and has mostly benefited the same business groups and elite members that have launched the country down the narrow road of market globalization. For the majority of the low-income population, water remains scarce and increasingly more expensive, whereas there is limited opportunity to influence policy-making, particularly due to the technocratic management of SEDAPAL. Likewise, the declining availability of water reserves around Lima and in the Andes represents a lingering threat to living standards and to the economic development of the metropolitan region (Chevallier et al. 2011). This socioecological dimension is certainly a crucial aspect of the neoliberalization of water and needs to be further addressed, because “while neoliberal economists tend to view market dynamics without seeing the people who create those dynamics, critics of neoliberalism should not make the same mistake” (Robertson 2007: 519).

Conclusions

The neoliberalization of the water services of Lima constitutes a vivid illustration of the intricacies of nature neoliberalization in Latin America – as an economic, ecological and political project – and of the adaptive, constantly evolving basis of the neoliberal state. The concrete experience of institutional and organizational reforms proved to be more complicated than mere changes in management and commercial practices. The continuity of neoliberalization strategies required increasing levels of flexibility and responsiveness to extra-economic pressures. On the one hand, the imposition of market-based responses to the long-standing water problems of Lima was an important element of the conservative reconfiguration of the national economy and renovation of the Peruvian State. The reform of the water industry was an invaluable opportunity to attract international companies and help to convey the message that the country was ‘open for business’. On the other hand, the advance of the neoliberalizing reforms in the 1990s and 2000s faced unexpected barriers due to the biophysical characteristics of water (a resource that is unequally distributed and requires large infrastructure works) and the persistent scepticism of the population (due to the irregularity of improvements and the deficient performance of the water utility). In order to overcome those difficulties, the state had to constantly amend its own configuration (e.g. the creation of a new regulatory agency and a new vice-ministry) and reaffirm its political commitment to market-friendly reforms (e.g. more aggressive communication campaigns, new legislation on public-private partnerships, shares of the water utility sold in the stock market, etc.).

The adjustments in the operation and structure of SEDAPAL carried out by various presidential administrations never disrupted the fundamental plan to renovate water services according to neoliberal priorities and the promotion of strong alliances with private businesses. The neoliberalized state demonstrated enough adaptive capacity to navigate through periods of authoritarianism and formal democratic rule. At the same time, the process of the neoliberalization

of water has been fraught with inconsistencies and contradictions. The achievements and failures of the local water reforms corroborate the observation of Durand (2003: 531) that the transition to neoliberalism in Peru has been “erratic, difficult and incomplete”. The attraction of foreign loans and international companies to the water sector of Lima, jointly funded by public funds and higher water tariffs, has not been accompanied by equivalent improvements in the quality of services and in the communication between the water utility and the population. The weakest and poorest communities, typically in the most remote *barriadas*, continue to struggle to have access to water, which is still provided through private vendors and at a higher price than the public water supply. More importantly, the need to maintain the profitability of private investors has locked up the water industry in a spiral of millionaire contracts and of constantly increasing tariffs. The significant monetization of water, at the expense of more adapted and localized solutions to water management problems, poses serious questions about the long-term sustainability of the reforms, particularly given the lack of metropolitan planning and the chaotic growth of the city. Instead of resolving the deficiencies of the water services of Lima, the process of neoliberalization seems a risky and short-lived attempt to compel nature, society and the state to follow the priorities of the national elite and the demands of globalized markets. The future of water management in Lima remains as uncertain as ever.

At face value, it seems that the water industry of Lima has undergone a major institutional and organizational transformation since the early 1990s. When considered in historical terms, however, the implementation of neoliberal policies has not produced a clear break with the pre-neoliberal past. In contrast to the arguments of Kuczynski and Williamson (2003), there is in fact an unambiguous line of continuity between the developmentalist phase and the experience of the last two decades: the primary role of investments in water infrastructure remains the support of economic activities and the satisfaction of the demands in the higher income areas of the capital

city, rather than addressing the service failures and sociospatial inequalities across Lima. The narrow results of the neoliberalization of water in Lima are evident due to increasing operational risks and growing tensions, whereas the national state has remained responsible for the more expensive procurement of additional sources of water and for the recovery of degraded river catchments. In the end, the neoliberalization of water in Lima constituted a conservative, partial answer to old and new water management problems and, what is more significant, a missed opportunity to genuinely address the limitations of the model bequeathed by the developmentalist state. Such incomplete, exogenous responses to socioecological crisis produced by capitalist production are not new in the history of Peru. As early as in 1925, Mariátegui concluded that the long tradition of oligarchic power and political *caudillos* created a situation of persistent inequalities and serious economic instabilities in the country. In his opinion, conventional economic policies were informed by foreign demands and always failed to consider “Peru’s deep reality” of social and racial discrimination against the poor *mestizos* and Indians. It was the time, therefore, to reject top-down, discriminatory economy, which only generates short-lived benefits and last-longing impacts, and start to “penetrate things and problems Peruvian” (Mariátegui 2011: 67). More than 80 years later, there are important parallels between the critique of the export-based, dependent economy earlier made by Mariátegui and the failures of neoliberal policies introduced in Lima and in Peru.

References

- Alcázar, L., Xu, L.C. and Zuluaga, A.M. (2000), *Institutions, Politics, and Contracts: The Attempt to Privatize the Water and Sanitation Utility in Lima, Peru* (Washington D.C.: World Bank).
- Anderson, T. and Leal, D. (2001), *Free Market Environmentalism* (New York: Palgrave).
- Arsel, M. (2012), 'Between 'Marx and Markets'? The State, The 'Left Turn' and Nature in Ecuador', *Tijdschrift voor Economische en Sociale Geografie*, 103 (2), pp. 150–163.
- Bakker, K. (2005), 'Neoliberalizing Nature? Market Environmentalism in Water Supply in England and Wales', *Annals of the Association of American Geographers*, 95 (3), pp. 542–565.

- Bakker, K. (2010), 'The Limits of 'Neoliberal Natures': Debating Green Neoliberalism', *Progress in Human Geography*, 34 (6), pp. 715–35.
- Barnett, C. (2005), 'The Consolations of 'Neoliberalism'', *Geoforum*, 36 (1), pp. 7–12.
- Barrantes, R. (2005), 'Servicios Públicos y Equidad', in V. Vich (ed.), *El Estado Está de Vuelta: Desigualdad, Diversidad y Democracia* (Lima: IEP), pp. 71–88.
- Bebbington, A. and Humphreys Bebbington, D. (2011), 'An Andean Avatar: Post-Neoliberal and Neoliberal Strategies for Securing the Unobtainable', *New Political Economy*, 16 (1), pp. 131–145.
- Berg, S. and Lin, C. (2008), 'Consistency in Performance Rankings: The Peru Water Sector', *Applied Economics*, 40 (6), pp. 793–805.
- Bonifaz, J. L. and Malásquez, E. (2008), 'Tarifas de SEDAPAL: La Tortuosa Tarea de Regular Empresas Públicas', *Apuntes de Estudio*, 67, pp. 51–68.
- Brand, U. and Görg, C. (2008), 'Post-Fordist Governance of Nature: The Internationalization of the State and the Case of Genetic Resources - A Neo-Poulantzian Perspective', *Review of International Political Economy*, 15 (4), pp. 567–589.
- Brenner, N., Peck, J. and Theodore, N. (2010), 'Variegated Neoliberalization: Geographies, Modalities, Pathways', *Global Networks*, 10 (2), pp. 182–222.
- Bulkeley, H. (2005), 'Reconfiguring Environmental Governance: Towards a Politics of Scales and Networks', *Political Geography*, 24 (8), pp. 875–902.
- Calderón Cockburn, J. (1993), *Agua y Liberalismo: Opciones para una Alternativa* (Lima: CEDAL).
- Calderón Cockburn, J. (2005), *La Ciudad Ilegal: Lima en el Siglo XX* (Lima: UNMSM).
- Castree, N. (2006), 'From Neoliberalism to Neoliberalisation: Consolations, Confusions, and Necessary Illusions', *Environment and Planning A*, 38 (1), pp. 1–6.
- Castree, N. (2008), 'Neoliberalising Nature: Processes, Effects, and Evaluations', *Environment and Planning A*, 40 (1), pp. 153–173.
- Castree, N. (2011), 'Neoliberalism and the Biophysical Environment 3: Putting Theory into Practice', *Geography Compass*, 5 (1), pp. 35–49.
- Chevallier, P., Pouyaud, B., Suarez, W. and Condom, T. (2011), 'Climate Change Threats to Environment in the Tropical Andes: Glaciers and Water Resources', *Regional Environmental Change*, 11 (SUPPL. 1), pp. 179–187.
- Conaghan, C.M. and Malloy, J.M. (1994), *Unsettling statecraft: Democracy and neoliberalism in the Central Andes* (Pittsburgh: University of Pittsburgh Press).
- Contreras, C. and Cueto, M. (2007), *Historia del Perú Contemporáneo: Desde las Luchas por la Independencia hasta el Presente* (Lima: IEP).
- Cornejo Ramírez, E. (2008), *Agua para Todos: El Modelo Peruano de Crecimiento con Inclusión Social*. Regional Conference organized by CEPAL, GTZ & inWent, Santiago de Chile, 23 September 2008.
- Demmers, J., Fernandez Jilberto, A.E. and Hogenboom, B. (eds) (2001), *Miraculous Metamorphoses: The Neoliberalization of Latin American Populism* (London and New York: Zed Books).
- Durand, F. (2003), *Riqueza Económica y Pobreza Política: Reflexiones sobre las Elites del Poder en un País Inestable* (Lima: PUCP).
- Durand, F. (2005), *La Mano Invisible en El Estado: Efectos del Neoliberalismo en el Empresariado y en la Política* (Lima: DESCO).
- Gestenberger, H. (2011), 'The Historical Constitution of the Political Forms of Capitalism', *Antipode*, 43 (1), pp. 60–86.

- Gherssi, E. and Ñaupari, H. (2005), 'Agua Sucia: Cólera en Perú', in K. Okonski, and J.C. Hidalgo (eds.), *Salud y Medio Ambiente: Mitos y Realidades* (London: International Policy Network), pp. 1–14.
- Giugale, M., Newman, J.L. and Fretes-Cibils, V. (eds) (2006), *Opportunity for a Different Peru: Prosperous, Equitable, and Governable* (Washington D.C.: World Bank).
- Gonzales de Olarte, E. (1998), *El Neoliberalismo a la Peruana: Economía Política del Ajuste Estructural 1990-1997* (Lima: IEP).
- Gonzales de Olarte, E. (2005), 'Crecimiento, Desigualdad e Ingovernabilidad en Perú de los 2000', in V. Vich (ed.), *El Estado Está de Vuelta: Desigualdad, Diversidad y Democracia* (Lima: IEP), pp. 49–69.
- Graham, S. and Marvin, S. (2001), *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (London and New York: Routledge).
- Hall, D. and Lobina, E. (2007), *Water Privatisation and Restructuring in Latin America* (London: Public Services International Research Unit).
- Haque, M.S. (2008), 'Global Rise of Neoliberal State and its Impact on Citizenship: Experiences in Developing Nations', *Asian Journal of Social Science*, 36 (1), pp. 1–34.
- Harvey, D. (1996), *Justice, Nature and the Geography of Difference* (Oxford: Blackwell).
- Harvey, D. (2005), *A Brief History of Neoliberalism* (Oxford: Oxford University Press).
- Hay, C. (2006), '(What's Marxist about) Marxist State Theory', in C. Hay, M. Lister and D. Marsh (eds.), *The State: Theories and Issues* (Basingstoke: Palgrave Macmillan), pp. 59–78.
- Heynen, N. and Robbins, P. (2005), 'The Neoliberalization of Nature: Governance, Privatization, Enclosure and Valuation', *Capitalism Nature Socialism*, 16 (1), pp. 5–8.
- Himley, M. (2008), 'Geographies of Environmental Governance: The Nexus of Nature and Neoliberalism', *Geography Compass*, 2 (2), pp. 433–451.
- IMP (1989), *Plan de Desarrollo Metropolitano de Lima-Callao 1990-2010* (Lima: IMP [Metropolitan Planning Institute]).
- INEI (2007), *Censos Nacionales. Lima: Instituto Nacional de Estadística e Informática* (Lima: INEI [National Institute of Statistics and Informatics]). Available at <http://www.inei.gob.pe> [accessed on May 15, 2010].
- Ioris, A.A.R. (2008), 'Water Institutional Reforms in Scotland: Contested Objectives and Hidden Disputes', *Water Alternatives*, 1 (2), pp. 253–270.
- Ioris, A.A.R. (2009), 'Water Reforms in Brazil: Opportunities and Constraints', *Journal of Environmental Planning and Management*, 52 (6), pp. 813–832.
- Ioris, A.A.R. (2010), 'The Political Nexus between Water and Economics in Brazil: A Critique of Recent Policy Reforms', *Review of Radical Political Economics*, 42 (2), pp. 231–250.
- Ioris, A.A.R. (2012), 'Applying the Strategic-Relational Approach to Urban Political Ecology: The Water Management Problems of the Baixada Fluminense, Rio de Janeiro, Brazil', *Antipode*, 44 (1), pp. 122–150.
- Jessop, B. (2008), *State Power: A Strategic Relational Approach* (Cambridge, UK: Polity).
- Kristoffersen, B. and Young, S. (2010), 'Geographies of Security and Statehood in Norway's 'Battle of the North'', *Geoforum*, 41 (4), pp. 577–584.
- Kuczynski, P.P. and Williamson, J. (eds) (2003), *After the Washington Consensus: Restarting Growth and Reform in Latin America* (Washington D.C.: Institute for International Economics).
- Lara, J.B. and López, D.L. (2007), 'The Harvest of Neoliberalism in Latin America', in R.A. Dello Buono and J.B. Lara (eds.), *Imperialism, Neoliberalism and Social Struggles in Latin America* (Leiden and Boston: Brill), pp. 17–35.

- Larner, W. (2000), 'Neo-liberalism: Policy, Ideology, Governmentality', *Studies in Political Economy*, 63(autumn), pp. 5–25.
- Larner, W. (2003), 'Neoliberalism', *Environment and Planning D*, 21 (5), pp. 509–512.
- Lucero, J.A. (2009), 'Decades Lost and Won: Indigenous Movements and Multicultural Neoliberalism in the Andes', in J. Burdick, P. Oxhorn and K.M. Roberts (eds), *Beyond Neoliberalization in Latin America? Societies and Politics at the Crossroads* (New York: Palgrave Macmillan), pp. 63–81.
- Mansfield, B. (2007), 'Articulation between Neoliberal and State-oriented Environmental Regulation: Fisheries Privatization and Endangered Species Protection', *Environment and Planning A*, 39 (8), pp. 1926–1942.
- Mariátegui, J.C. (2011), *An Anthology*. Trans. H.E. Vanden and M. Becker (New York: Monthly Review Press).
- Marx, K. (1973), *Grundrisse*. Trans. M. Nicolaus (London: New Left Review and Penguin Books).
- Matos Mar, J. and Matos Lagos, R. (1990), *Aguas Residuales, Agricultura y Alimentación en la Gran Lima* (Lima: OPS and OMS).
- Mauceri, P. (1995), 'State Reform, Coalitions, and the Neoliberal Autogolpe in Peru', *Latin American Research Review*, 30 (1), pp. 7–37.
- McAfee, K. and Shapiro, E.N. (2010), 'Payments for Ecosystem Services in Mexico: Nature, Neoliberalism, Social Movements, and the State', *Annals of the Association of American Geographers*, 100 (3), pp. 579–599.
- McCarthy, J. (2012), 'The Financial Crisis and Environmental Governance 'after' Neoliberalism', *Tijdschrift voor Economische en Sociale Geografie*, 103 (2), pp. 180–195.
- Mosse, D. (2003), *The Rule of Water: Statecraft, Ecology, and Collective Action in South India* (New Delhi: Oxford University Press).
- Narsiah, S. (2010), 'The Neoliberalisation of the Local State in Durban, South Africa', *Antipode*, 42 (2): pp. 374–403.
- O'Brien, M. and Penna, S. (1997), 'European Policy and the Politics of Environmental Governance', *Policy and Politics*, 25 (2), pp. 185–200.
- O'Donnell, G.A. (1982), *El Estado Burocrático Autoritario, 1966-1973: Triunfos, Derrotas, Crisis* (Buenos Aires: Editorial del Belgrano).
- O'Reilly, K. and Dhanju, R. (2012), 'Hybrid Drinking Water Governance: Community Participation and Ongoing Neoliberal Reforms in Rural Rajasthan, India', *Geoforum*, 43 (3), pp. 623–633.
- Oxhorn, P. (2009), 'Beyond Neoliberalism? Latin America's New Crossroads', in J. Burdick, P. Oxhorn and K.M. Roberts (eds), *Beyond Neoliberalization in Latin America? Societies and Politics at the Crossroads* (New York: Palgrave Macmillan), pp. 217–233.
- Park, J., Conca, K. and Finger, M. (eds) (2008), *The Crisis of Global Environmental Governance: Towards a new Political Economy of Sustainability* (Abingdon: Routledge).
- Paterson, M., Humphreys, D. and Pettiford, L. (2003), 'Conceptualizing Global Environmental Governance: From Interstate Regimes to Counter-hegemonic Struggles', *Global Environmental Politics*, 3 (2), pp. 1–10.
- Peck, J., Theodore, N. and Brenner, N. (2009), 'Postneoliberalism and its Malcontents', *Antipode*, 41 (1), pp. 94–116.
- Perreault, T. (2005), 'State Restructuring and the Scale Politics of Rural Water Governance in Bolivia', *Environment and Planning A*, 37 (2), pp. 263–284.
- Poulantzas, N. (1978), *State, Power, Socialism* (London: Verso).

- Robbins, P. (2000), 'The Practical Politics of Knowing: State Environmental Knowledge and Local Political Economy', *Economic Geography*, 76 (2), pp. 126–144.
- Robertson, M. (2007), 'Discovering Price in All the Wrong Places: The Work of Commodity Definition and Price under Neoliberal Environmental Policy', *Antipode*, 39 (3), pp. 500–526.
- Sangameswaran, P. (2009), 'Neoliberalism and Water Reforms in Western India: Commercialization, Self-sufficiency, and Regulatory Bodies', *Geoforum*, 40 (2), pp. 228–238.
- SEDAPAL (1998), *Plan Maestro de los Sistemas de Agua Potable y Alcantarillado de Lima y Callao* (Lima: Consorcio Greeley & Hansen – Latin Consult).
- SEDAPAL (2005), *Plan Maestro Optimizado* (Lima: SEDAPAL).
- SEDAPAL (2007), *Plans for the Water and Wastewater System in Lima: 2008-2015* (Lima: SEDAPAL).
- Selowsky, M. (1981), 'Income Distribution, Basic Needs and Trade-offs with Growth: The Case of Semi-industrialized Latin American Countries', *World Development*, 9 (1), pp. 73–92.
- Smith, L. (2004), 'The Murky Waters of the Second Wave of Neoliberalism: Corporatization as a Service Delivery Model in Cape Town', *Geoforum*, 35 (3), pp. 375–393.
- Solfrini, G. (2001), 'Populism and Authoritarianism in Peru: An Old Vice in the Neoliberal Era', in J. Demmers, A.E. Fernández Jilberto and B. Hogenboom (eds), *Miraculous Metamorphoses: The Neoliberalization of Latin American Populism* (London and New York: Zed Books), pp. 108–131.
- Solo, T.M. (1999), 'Small-scale Entrepreneurs in the Urban Water and Sanitation Market', *Environment and Urbanization*, 11 (1), pp. 117–131.
- SUNASS (2007), *Cerrando el Déficit de Infraestructura de Agua Potable y Alcantarillado Lima y Callao* (Lima: SUNASS).
- SUNASS (2010), *Estudio Tarifario: Determinación de la Formula Tarifaria, Estructura Tarifaria y Metas de Gestión Aplicables a la Empresa de Servicios de Agua Potable y Alcantarillado – SEDAPAL S.A* (Lima: SUNASS).
- Wise, C. (2003), *Reinventing the State: Economic Strategy and Institutional Change in Peru* (Ann Arbor: University of Michigan).
- Wissen, M. (2009), 'Contested Terrains: Politics of Scale, the National State and Struggles for the Control over Nature', *Review of International Political Economy*, 16 (5), pp. 883–906.
- World Bank (1997), *Toolkits for Private Participation in Water and Sanitation* (Washington D.C.: World Bank).

Acknowledgements: The research was supported by a grant from the Leverhulme Trust. The author is also grateful to Dr. Ben Davies, Kathryn Louise Miles and Kate Symons for their suggestions on earlier versions of the paper and to two anonymous referees for their constructive criticism. The usual disclaimers apply.

ⁱ The current discussion is based on fieldwork carried out in 2009, which included participant observation and systematic visits to the metropolitan periphery, as well as the attendance of public events and interviews with government officials, private companies, trade union leaders and civil society activists. Respondents came from a wide array of entities that represented the breadth of

interests linked to the provision of public services, social movements and environmental conservation. In addition, extensive secondary information, engineering projects and policy documentation were obtained from the databases of the regulatory agency (SUNASS), the water utility (SEDAPAL), the National Library's researchers division and the Office for National Statistics (INEI).

ⁱⁱ Page 315,085 of the public gazette El Peruano, 19 Mar 2006.

ⁱⁱⁱ After half a decade with modest results, the Peruvian economy achieved significantly high rates of growth with Alan García: 7.7% in 2006, 8.9% in 2007, 9.8% in 2008, 0.9% in 2009, and 8.8% in 2010 (according to INEI statistics). At the same time, during the García Administration, there was a significant increase in the number of socionatural conflicts (i.e. an increase of 150% between 2008 and 2009), according to the Defensoría del Pueblo (Citizen's Bureau), which was particularly related to the concessions of land and resources to private international companies in the mountains and in the Amazon (Bebbington and Humphreys Bebbington 2011). In addition, poverty levels remained very high nationwide (i.e. approximately 52% of the population living in poverty and around 24% in extreme poverty), cf. International Financial Institutions, "Is the neoliberal economic model working in Peru?" Accessed 10/11/2010. <http://ifis.choike.org>

^{iv} Source: Andina. 2011. Sedapal tendrá listo a finales de año primer paquete de bonos corporativos que emitirá. Accessed 13/07/2011. <http://www.andina.com.pe>

^v Black water market remains a very profitable activity and is practically the only alternative for the poorest and most isolated residents. While SEDAPAL charges around S/. 0.95/m³ (up to the threshold of 25/m³/month, plus IVA), housing associations charge S/. 8.00/m³, and water tankers charge S/. 12.50/m³ (data gathered from residents in the periphery of Lima in Apr 2009).

^{vi} There exists a clear uneasiness among the more orthodox neoliberals with the fact that the expansion of the water infrastructure in Lima – for example, under the APT programme – is still mainly financed by the government rather than by those that directly benefit from the investments (i.e. the customers of SEDAPAL). The fundamental criticism is that, in spite of significant works built by the private sector, the bulk of the investments continue to rely on general taxation.

^{vii} Source: El Comercio. 2012. "Queremos incentivar la cooperación privada en Sedapal", dice presidente del ente estatal. Accessed 30/04/2012. <http://elcomercio.pe/economia/1375562/noticia-queremos-incentivar-cooperacion-privada-sedapal-dice-presidente-ente-estatal>